

NEW GENUS AND NEW SPECIES OF COLPURINI  
(HETEROPTERA: COREIDAE) FROM THE PHILIPPINE REPUBLIC

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*Abstract.*—One new genus (*Carvalhygia*) and three new species (*C. carvalhoi*, *C. milzae*, and *C. nigra*) collected in the Philippine Republic are described in the tribe Colpurini (Coreidae). Habitus view illustrations and drawings of the male and female genitalia are provided to help distinguish these taxa.

*Key Words:* Insecta, Heteroptera, Coreidae, Colpurini, new genus, new species, Philippine Republic

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Only three genera and ten species of Colpurini have been described from the Philippine Republic. The genus *Hygia* Uhler contains three subgenera: *Colpura* Bergroth with two species (*obscuricornis* (Stål) and *pallidicornis* (Stål)), *Microcolpura* Breddin with one species (*denticollis* (Bergroth)), and *Sphinctocolpura* Breddin with five species (*dentifer* (Stål), *maculipes* (Stål), *obscuripes* (Stål), *pictipes* (Stål) and *punctipes* (Stål)). The genus *Homalocolpura* Breddin includes one species (*sorbax* Bergroth) and the genus *Typhlocolpura* Breddin has one species (*vulcanalis* Bergroth).

The present paper adds one new genus and three new species. Three features of this new genus are the reduced to absent postocular tubercle, the reduced hemelytra that exhibit a coleopteroid condition, and the absence of ocelli.

The following abbreviations are used for the institutions cited in this paper: BMNH (The Natural History Museum, London, England); UNAM (Instituto de Biología, Universidad Nacional Autónoma de México, México D.F.); and USNM (U.S. Na-

tional Museum of Natural History, Washington, D.C.).

All measurements are given in millimeters.

This paper is written in honor of the late Dr. José Candido Melo Carvalho, in recognition of his voluminous and seminal contributions on the Miridae of the world, as well as on other groups of animals and key papers on ethnical South American groups. His distinguished and productive career has long served as an example of excellence.

***Carvalhygia* Brailovsky, NEW GENUS**

*Diagnosis.*—*Carvalhygia* Brailovsky, new genus is similar and closely related to *Lygaeopharus* Stål and *Typhlocolpura* Stål. These three genera share several characters: ocelli reduced or absent, tylus apically globose and truncated, antenniferous tubercle unarmed, hemelytral membrane reduced, and the female abdominal sternite VII with plica and fissura.

*Carvalhygia* is easily distinguished because it is the only known genus in the tribe Colpurini with the postocular tubercle ex-

tremely reduced to absent, eyes globose, slightly protuberant and the paratergite IX thick and folded downward.

*Carvalhygia* exhibits the frontal angles of pronotum rounded, not exposed or produced forward as short or long conical teeth, buccula with a sharp middle projection, and femora armed. These are characters that may or may not be present in other genera, making the combination unique to this new genus. In *Lygaeopharus* the frontal angles are produced forward as long conical teeth, the femora are unarmed and the buccula entirely rounded, without sharp middle projection; in *Typhlocolpura* the frontal angles are produced forward as long conical teeth, the femora could be armed or unarmed, and the buccula always with a sharp middle projection.

Generic description.—Head: Longer than wide, pentagonal and dorsally flat or slightly depressed; tylus unarmed, apically globose, extending anteriorly to and laterally higher than juga; jugum unarmed, thickened and shorter than tylus; antenniferous tubercle unarmed, quadrate, robust, apex truncated; side of head in front of eye unarmed and obliquely straight; antennal segment I robust, thickest, slightly curved outward, shorter than head; segments II and III cylindrical and slender; segment IV fusiform; segment II the longest, segment IV the shortest and III longer than I; ocelli absent; posterior pit between eyes deep and diagonally excavated; eyes globose, slightly protuberant, and based on an hypothetical line the upper margin is raised above the vertex and frontal area; postocular tubercle extremely reduced to absent; buccula rounded, elevated, short, not projecting beyond antenniferous tubercle, with a sharp middle projection; rostrum reaching posterior third of abdominal sterna III or IV; rostral segment I reaching posterior margin of the gula.

Thorax.—Pronotum wider than long, trapeziform and bilobed; anterior lobe longer than posterior lobe, each margin convexly rounded, emarginated and moderately ele-

vated; collar wide; frontal angles rounded, not exposed or produced forward as short conical teeth; humeral angles rounded, not exposed; posterolateral border obliquely straight and posterior border straight or slightly concave; calli slightly convex, never separated along midline by longitudinal furrow; posterior margin without a transverse ridge. Anterior lobe of metathoracic peritreme elevated and reniform, posterior lobe sharp, small.

Legs.—Ventral surface of femora armed with two subdistal short spines and few more scattered along ventral surface; tibiae cylindrical and sulcate.

Scutellum.—Triangular, flat, wider than long or as long as wide; apex acute.

Hemelytra.—Coleopteroid; clavus and corium fused; wings do not overlap but meet along the midline; membrane reduced to a small flap, leaving the posterior abdominal terga exposed.

Abdomen.—Connexival segments strongly elevated; posterior angle of each connexival segment complete, not extending on a short spine; abdominal sterna with medial furrow, projecting to anterior third of sternite IV or V.

Integument.—Body surface rather dull. Head, pronotum, scutellum, clavus, corium, thorax, abdomen, and exposed parts of genital segments of both sexes with circular grayish-white farinose punctures and each punctuation with short, decumbent golden or silvery bristlelike setae; antennae, legs, and abdominal sterna with few long, erect setae; antennae and legs minutely granulate.

Male genitalia.—Genital capsule simple and globose; posteroventral edge entire, transversely straight, with lateral angles rounded (Fig. 3).

Female genitalia.—Abdominal sternite VII with plica and fissura; plica triangular, reaching middle third of sternite VII; gonocoxae I with dorsal third closed and ventral third opened, slightly triangular and with the external apical angle globose; paratergite VIII short, square, with visible spiracle; par-

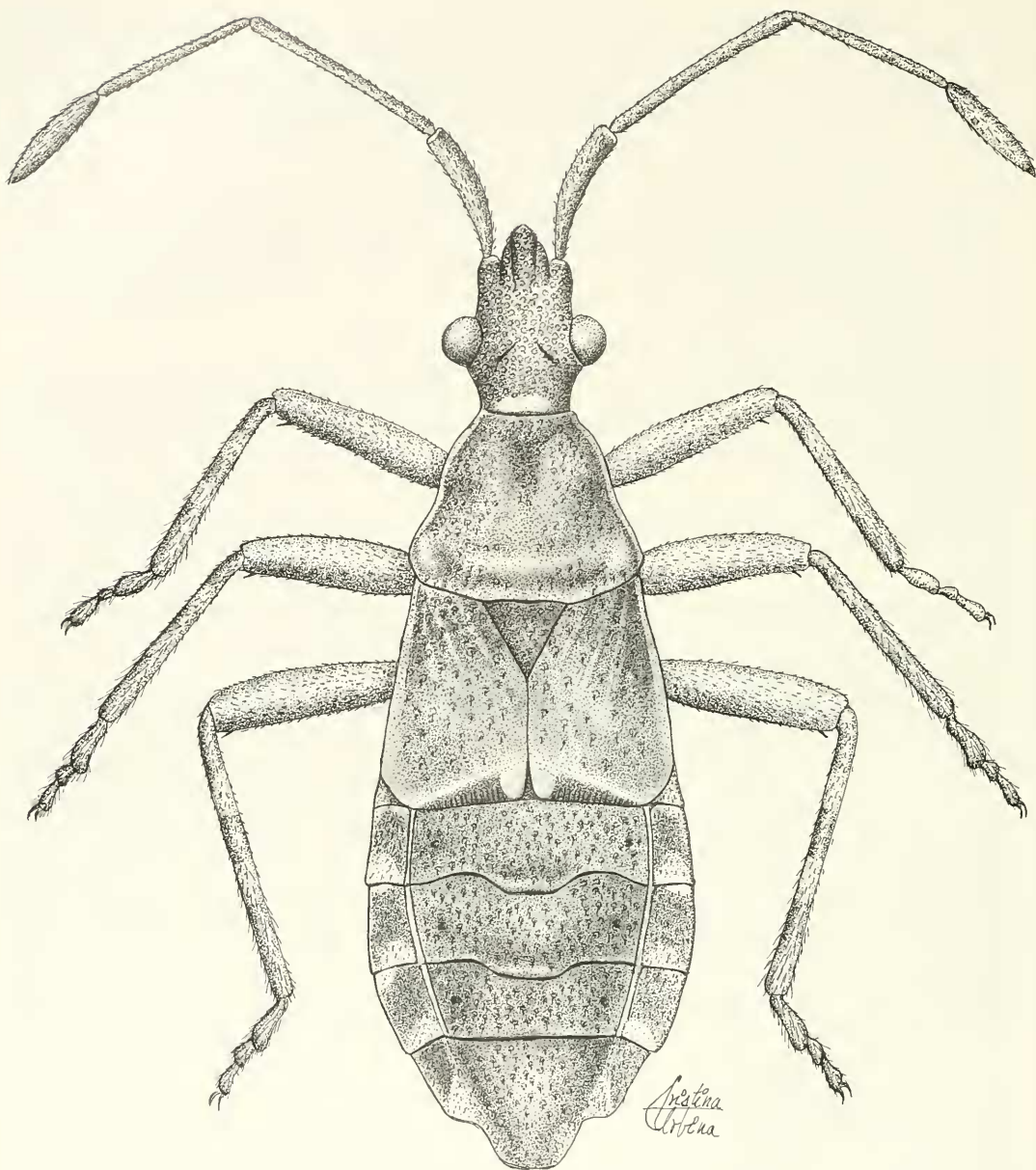


Fig. 1. Dorsal view of *Carvalhygia carvalhoi*, ♂.

atergite IX longer than VIII, rectangular, entirely thick and folded downward (Figs. 4-6).

Etymology.—I am pleased to name this new genus for Dr. José Candido Melo Carvalho, distinguished Brazilian hemipterist, in recognition of his splendid contributions to the sciences. Gender feminine.

Type species.—*Carvalhygia carvalhoi* Brailovskaya, new species.

***Carvalhygia carvalhoi* Brailovskaya,**  
NEW SPECIES  
Figs. 1, 3-5

Description.—Measurements: Male: Head length 2.12; interocular space 1.20;

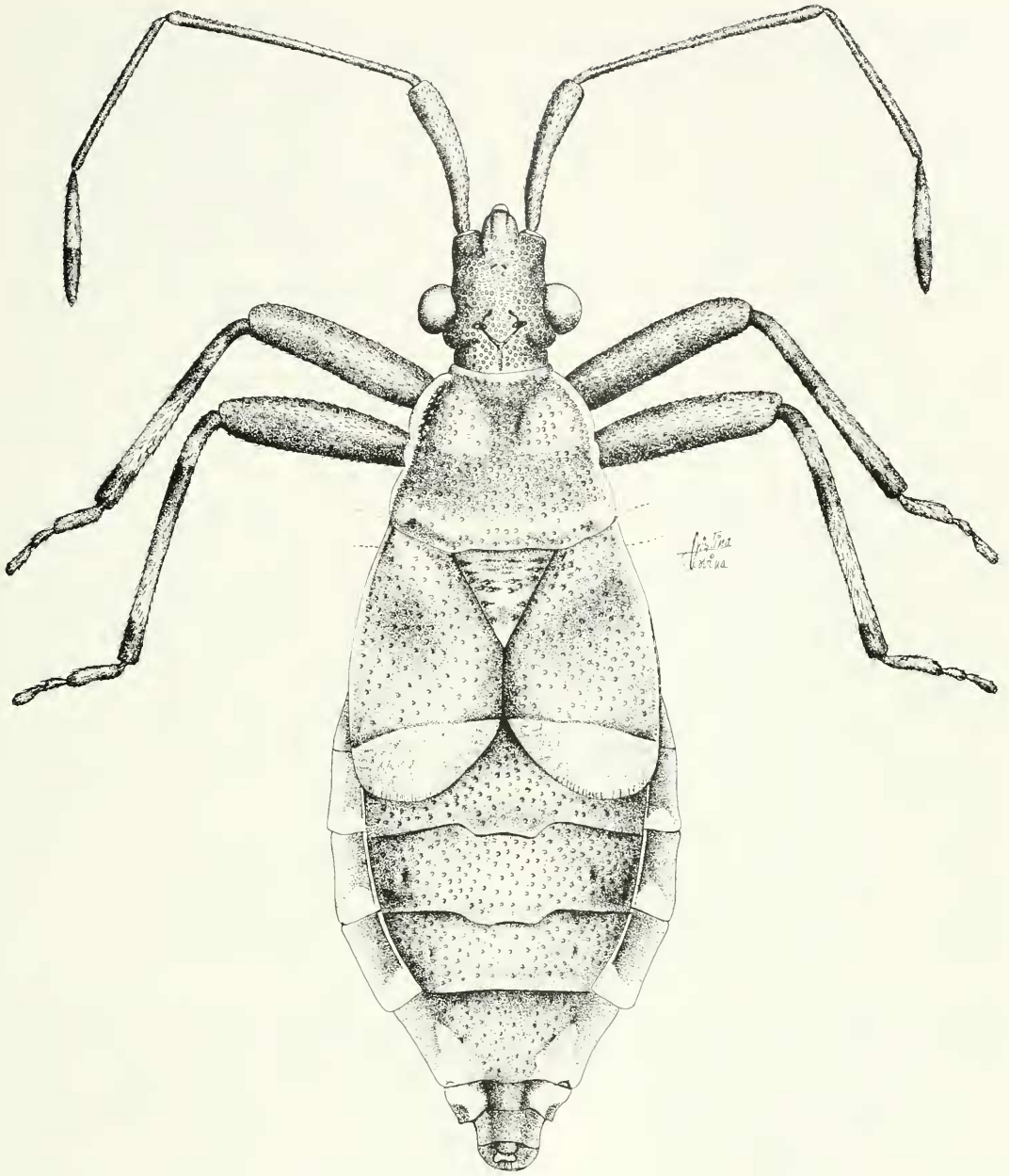
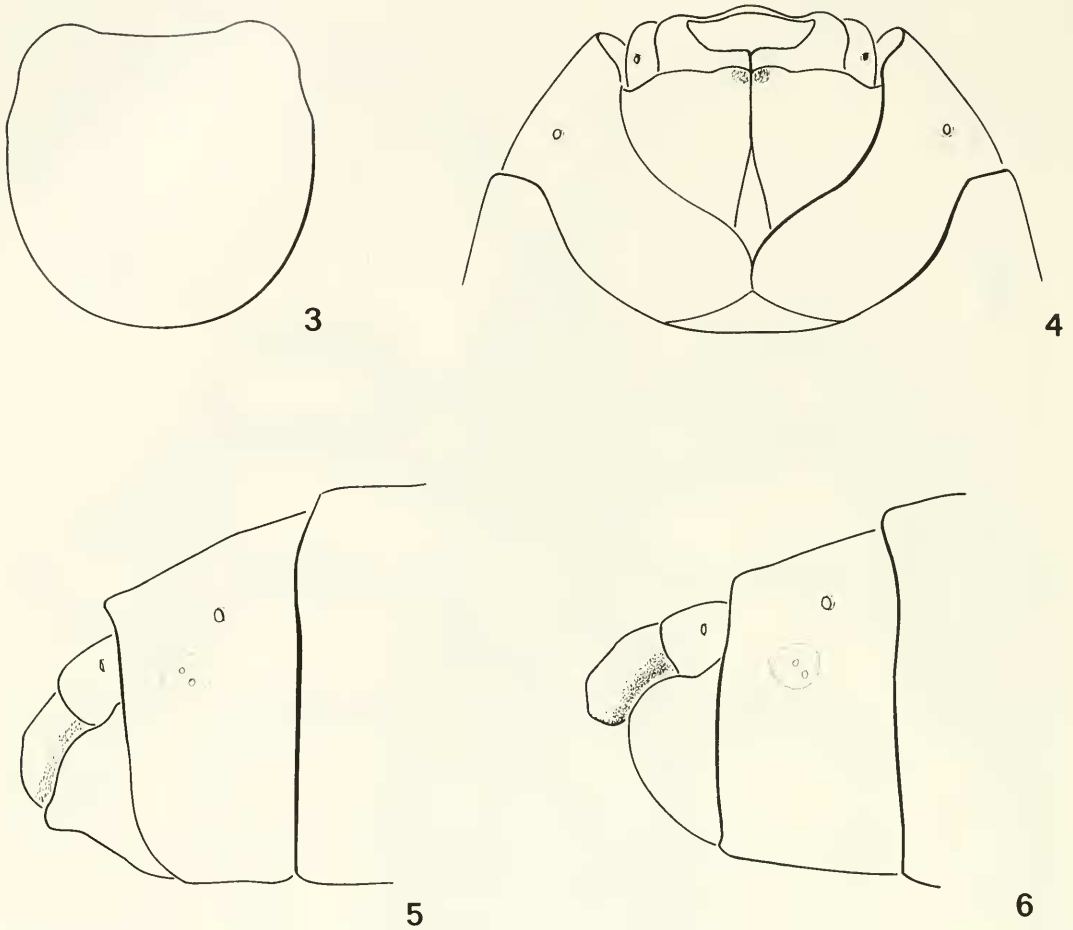


Fig. 2. Dorsal view of *Carvalhygia milzae*, ♀.

width across eyes 2.08; preocular distance 1.24; length antennal segments: I, 1.64; II, 2.40; III, 1.96; IV, 1.52. Pronotum: Total length of anterior lobe 1.26; total length of posterior lobe 0.88; total width of anterior lobe 2.28; total width of posterior lobe 2.84.

Scutellar length 1.04; width 1.12. Total body length 10.95.

Female.—Head length 2.28; interocular space 1.24; width across eyes 2.24; preocular distance 1.36; length antennal segments: I, 1.76; II, 2.76; III, 2.04; IV, 1.64.



Figs. 3-6. 3-5. *Carvalhygia carvalhoi*. 3. Male genital capsule in caudal view. 4-5. Female genital plates. 4. Caudal view. 5. Lateral view. 6. Female genital plates in lateral view of *Carvalhygia milzae*.

Pronotum: Total length of anterior lobe 1.16; total length of posterior lobe 1.00; total width of anterior lobe 2.56; total width of posterior lobe 3.20. Scutellar length 1.36; width 1.44. Total body length 12.10.

Male.—Dorsal coloration black with red brown reflections on posterior third of pronotum, clavus, and corium; antennal segments I to IV pale to dull orange; anterolateral margin of pronotum and costal margin of corium dull orange to chestnut brown; hemelytral membrane dark brown with inner portion creamy yellow; connexival segments III to VII red brown with posterior margin yellow; abdominal terga black with

lateral margin of VII yellow. Ventral coloration black with following areas orange, with or without chestnut reflections: rostral segments I to IV, anterior and posterior lobe of metathoracic peritreme and pleural margins of the abdominal sternites IV to VII; coxae black, trochanters yellow with chestnut reflections, femora dull orange with basal joint yellow, tibiae dull orange with two diffuse yellow rings, one subbasal, other one near middle, and tarsi dull orange with chestnut reflections.

Male.—Rostrum reaching middle or posterior third of abdominal sternite IV; scutellum wider than long; hemelytral mem-

brane reduced and reaching middle third of abdominal tergite IV.

Female.—Coloration: Similar to male. Connexival segments VIII and IX red brown with posterior margin yellow; abdominal terga VIII and IX black. Gonocoxae I black with internal apical angle yellow; paratergite VIII and IX red brown with anterior third yellow. Genital plates. Paratergite IX conspicuously folded downward (Figs. 3–5).

Variation.—The type material exhibits some color variation on most specimens: 1, antennal segment I red brown with basal third yellow; 2, antennal segment IV red brown; 3, femora red brown with dull orange reflections; 4, pleural margins of abdominal sterna III to VII red brown with dull orange reflections.

Type material.—Holotype: ♂, Philippine Republic, Sibuyan Island, Col. Baker (without additional data) (USNM). Paratypes: 3 ♂♂, 5 ♀♀, Philippine Republic, Sibuyan Island, Col. Baker (without additional data) (USNM, UNAM and BMNH).

Etymology.—I am pleased to name this new species after the late Dr. José Candido Melo Carvalho.

*Carvalhygia milzae* Brailovsky,

NEW SPECIES

Figs. 2, 6

Description.—Measurements: Female: Head length 2.20; interocular space 1.22; width across eyes 2.16; preocular distance 1.30; length antennal segments: I, 1.96; II, 3.12; III, 2.32; IV, 1.64. Pronotum: Total length of anterior lobe 1.12; total length of posterior lobe 0.96; total width of anterior lobe 2.16; total width of posterior lobe 2.64. Scutellar length 1.22; width 1.22. Total body length 12.00.

Female.—Dorsal coloration: Head and anterior lobe of pronotum dark red brown; posterior lobe of pronotum bright orange red; scutellum, clavus and corium dull orange red, with apical margin of corium mostly dark brown; connexival segments III to IX pale orange brown with posterior mar-

gin yellow; abdominal terga red brown; antennal segment I bright orange; segment II dull orange with basal third pale yellow; segment III dull orange and IV dark brown with subbasal yellow ring; collar, anterolateral margin of pronotum, apex of scutellum, and costal margin of corium bright to pale orange with yellow reflections; hemelytral membrane pale yellow. Ventral coloration: Head and prothorax dark red brown; mesothorax, metathorax, abdominal sternite and genital plates pale red brown; rostral segment I yellow and segments II to IV bright chestnut orange; coxae and femora bright orange red; trochanters yellow; protibiae pale orange with two yellow rings one subbasal, other one near middle; mesotibiae pale orange with yellow reflections; tarsi pale orange with yellow reflections (posterior leg absent); anterior and posterior lobe of metathoracic peritreme bright yellow with orange reflections; pleural margin of abdominal sternite III to VII, posterior edge of abdominal sternite IV to VII, and internal apical angle of gonocoxae I yellow.

Rostrum reaching anterior third of abdominal sternite IV; scutellum as long as wide; hemelytral membrane reduced and reaching posterior third of abdominal tergite IV. Genital plates. Paratergite IX slightly folded downward (Fig. 6).

Type material.—Holotype: ♀, Philippine Republic, Panay Mt. (Madaas), Col. W. Schultze (without additional data) (BMNH).

Etymology.—Named for Milza, Carvalho's wife and indefatigable partner.

*Carvalhygia nigra* Brailovsky,

NEW SPECIES

Fig. 7

Description.—Measurements: Female: Head length 2.04; interocular space 1.22; width across eyes 1.86; preocular distance 1.16; length antennal segments: I, 1.72; II, 2.52; III, 2.00; IV, absent. Pronotum: Total length of anterior lobe 1.12; total length of posterior lobe 0.72; total width of anterior lobe 1.88; total width of posterior lobe 2.40.

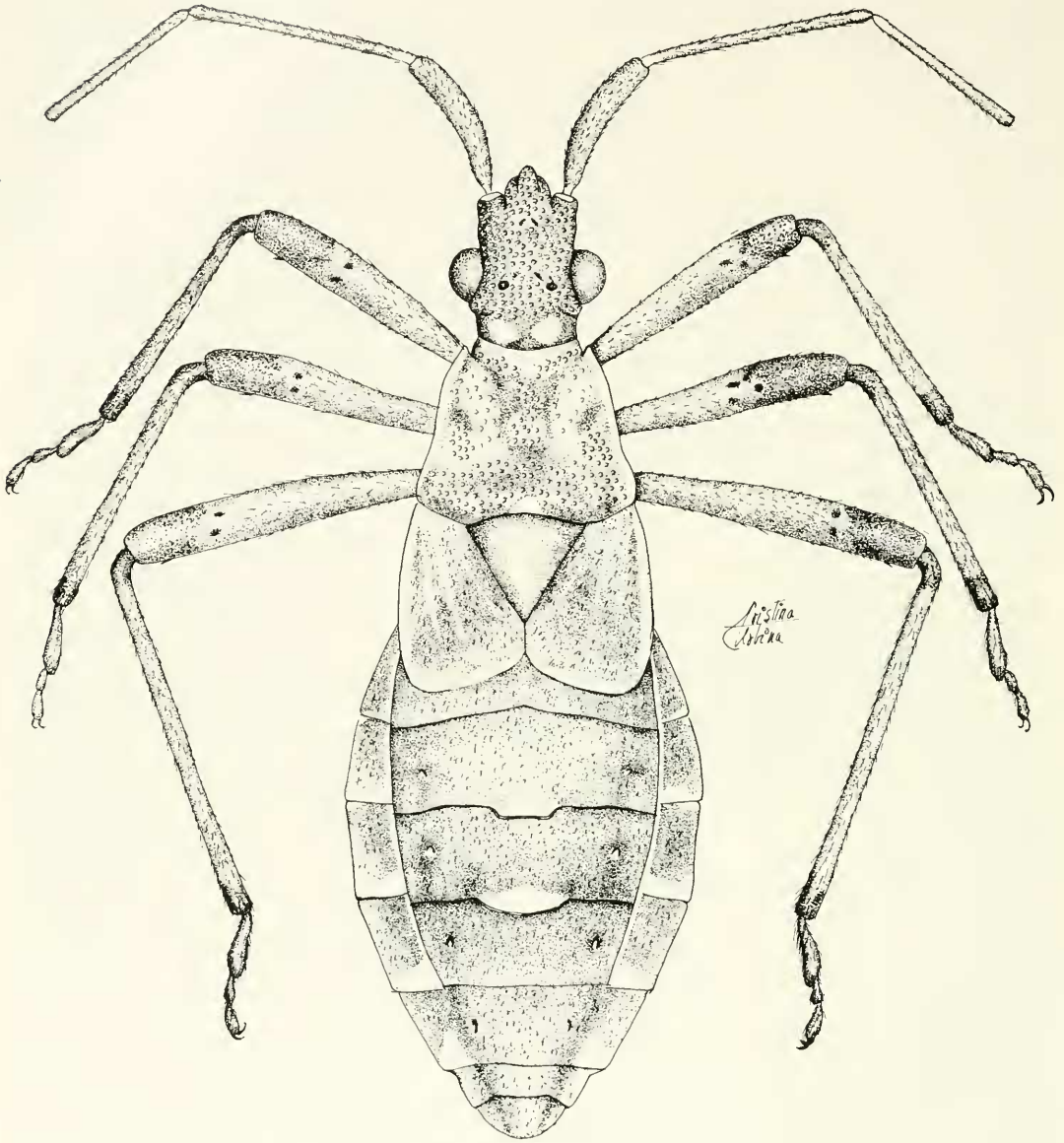


Fig. 7. Dorsal view of *Carvalhygia nigra*, ♀.

Scutellar length 1.00; width 1.08. Total body length 11.00.

Female.—Dorsal coloration black with following areas pale dirty yellow: anterolateral margin of pronotum and costal margin of corium; antennal segment I dark red brown, segments II and III dull orange with basal third yellow; segment IV absent; hemelytral membrane dirty yellow; connex-

ival segments III to IX red brown with posterior margin yellow; abdominal terga black with intersegmental scars IV-V and V-VI pale orange yellow. Ventral coloration black with following areas yellow, with or without chestnut reflections: rostral segments I to IV, anterior and posterior lobe of metathoracic peritreme, and posterior margin of pleural margins of abdominal sternite IV to

VII; gonocoxae I black with internal apical angle yellow; paratergite VIII and IX black with upper margin yellow; coxae black; trochanters yellow; femora yellow, densely covered with dark red brown discoidal spots and with posterior third or posterior half and with spines dark red brown; tibiae yellow with basal join and apical third dark red brown; tarsi yellow with chestnut reflections.

Rostrum reaching posterior third of abdominal sternite III; scutellum wider than long; hemelytral membrane extremely reduced and reaching middle third of abdominal tergite III. Genital plates. Paratergite IX slightly folded downward.

Type material.—Holotype: ♀, Philippine Republic, Mindoro, Baco River, January–February 1910, J.J. Mounsey (BMNH).

Etymology.—From the Latin *nigra*, meaning black.

KEY TO THE KNOWN SPECIES OF  
*CARVALHYGIA*

- 1. Hemelytral membrane dark brown with inner portion creamy yellow (Fig. 1) .....  
..... *carvalhoi* Brailovsky, new species
- Hemelytral membrane entirely yellow (Figs. 2, 7) ..... 2
- 2. Hemelytral membrane extremely reduced, reaching middle third of abdominal tergite III; rostrum reaching posterior third of abdominal sternite III; profemora and mesofemora yellow, with posterior third or posterior half, as well as several discoidal spots, dark red brown; scutellum wider than long .....  
..... *nigra* Brailovsky, new species

- Hemelytral membrane never extremely reduced, reaching posterior third of abdominal tergite IV; rostrum reaching anterior third of abdominal sternite IV; profemora and mesofemora uniformly bright orange red; scutellum as long as wide ..... *milzae* Brailovsky, new species

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